



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D4202-1**Job Sheet 190707**

Part No: D4202-1

Job Qty: 600 pcs

Part Name: Spacer



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/13/19

Job Tracking No:

Due Date: 2/28/19

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV C IPP REV:A NEW ISSUE 10-12-07 JLM VERIFIED:DD IPP REV:B AS PER REV B 11-04-05 JLM
VERIFIED BY:DD IPP Rev:C 11.12.19 PER DWG REV.C DD verf:EC

Ship Via:

Bill of Materials**Job Routing**

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup Hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Hardinge - 1	600 pcs		2/28/19	0.00	25.53	Hardinge - 1	1/18	JBD 19/2/15
120	QC 8	600 pcs		2/28/19	0.00	0.00	QC 8 - 12		
							QC 8 - 14		
							QC 8 - 17		
							QC 8 - 20		
							QC 8 - 25		
							QC 8 - 3		
							QC 8 - 32		
							QC 8 - 33		
							QC 8 - 35		
							QC 8 - 39		
							QC 8 - 4		
							QC 8 - 44		
							QC 8 - 45		
							QC 8 - 49		
							QC 8 - 58		
							QC 8 - 8		
							QC 8 - 9		
							QC 8 - 68		
							QC 8 - 67		
							QC 8 - 1 (A)		LT 2019-02-19
							QC 8 - 47		
130	Outsource - 1 - Heat Treat	600 pcs		2/28/19			MEI001-VC	9	CT 19-02-19
140	Packaging 2-1 - Receive - B4B	600 pcs		2/28/19	0.00	0.00	Packaging 2 - 1 - B4B		
							Packaging 2 - 2 - B4B		
							Packaging 2 - 3 - B4B		
							Packaging 2 - 5 - B4B		
							Packaging 2 - 4 - B4B		
							Packaging 2 - 6 - B4B		



Container No: S154382



Part: D4202-1

Job No: 190707

Serial No/Batch: S154382

Revision:

Inspector:

Exp Date:

Instructions: Various STC's

Date: 03/12/19

Dart Aerospace Ltd.
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CANADA
TEL : 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

					Packaging 2 - 7 - B4B	
					Packaging 2 - 8 - B4B	
					Packaging 2 - 9 - B4B	
					Packaging 2 - 10 - B4B	
					Packaging 2 - 11 - B4B	
					Packaging 2 - 12 - B4B	
					Packaging 2 - 13 - B4B	
					Packaging 2 - 14 - B4B	
					Packaging 2 - 15 - B4B	
					Packaging 2 - 16 - B4B	
					Packaging 2 - 17 - B4B	
					Packaging 2 - 18 - B4B	
					Packaging 2 - 19 - B4B	
					Packaging 2 - 20 - B4B	
					Packaging 2 - 21 - B4B	
					Packaging 2 - 22 - B4B	
					Packaging 2 - 23 - B4B	
					Packaging 2 - 24 - B4B	
					Packaging 2 - 25 - B4B	
					Packaging 2 - 26 - B4B	
					Packaging 2 - 27 - B4B	
					Packaging 2 - 28 - B4B	
					Packaging 2 - 29 - B4B	
					Packaging 2 - 30 - B4B	
					Packaging 2 - 31 - B4B	
					Packaging 2 - 32 - B4B	
					Packaging 2 - 33 - B4B	
					Packaging 2 - 34 - B4B	
					Packaging 2 - 35 - B4B	
					Packaging 2 - 36 - B4B	
150 QC 6					QC 6 - 42	
600 pcs					QC 6 - 9	
2/28/19					QC 6 - 68	
0.00 0.00					QC 6 - 61	
160 Handfinish - 4-1-Assembly-B4B					Handfinish - 4 - 1 - B4B	
600 pcs					Handfinish - 4 - 10 -	
2/28/19						
0.00 3.00						

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						B4B	
						Handfinish - 4 - 11 - B4B	
						Handfinish - 4 - 12 - B4B	
						Handfinish - 4 - 13 - B4B	
						Handfinish - 4 - 14 - B4B	
						Handfinish - 4 - 15 - B4B	
						Handfinish - 4 - 2 - B4B	
						Handfinish - 4 - 3 - B4B	
						Handfinish - 4 - 4 - B4B	00
						Handfinish - 4 - 5 - B4B	
						Handfinish - 4 - 6 - B4B	
						Handfinish - 4 - 7 - B4B	
						Handfinish - 4 - 8 - B4B	
						Handfinish - 4 - 9 - B4B	
190 Packaging 3-1 - Stock - B4B	600 pcs	2/28/19	0.00	0.00		Packaging 3 - 1 - B4B	
						Packaging 3 - 2 - B4B	
						Packaging 3 - 3 - B4B	
						Packaging 3 - 4 - B4B	
						Packaging 3 - 5 - B4B	
						Packaging 3 - 6 - B4B	
						Packaging 3 - 7 - B4B	
						Packaging 3 - 8 - B4B	
						Packaging 3 - 9 - B4B	
						Packaging 3 - 10 - B4B	
						Packaging 3 - 11 - B4B	
						Packaging 3 - 12 - B4B	
						Packaging 3 - 13 - B4B	
						Packaging 3 - 14 - B4B	
						Packaging 3 - 15 - B4B	
						Packaging 3 - 16 - B4B	
						Packaging 3 - 17 - B4B	
						Packaging 3 - 18 - B4B	
						Packaging 3 - 19 - B4B	
						Packaging 3 - 20 - B4B	
						Packaging 3 - 21 - B4B	
						Packaging 3 - 22 - B4B	
						Packaging 3 - 23 - B4B	

					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	DP
					Packaging 3 - 27 - B4B	
					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 - B4B	
					Packaging 3 - 36 - B4B	
200 QC 21 - SA	600 pcs	2/28/19	0.00	0.00	QC 21 - SA - 21	
					QC 21 - SA - 70	MAR 13 2019 70
					QC 21 - SA - 53	9-89

Part Op 100 - (Hardinge) 1- Machine as per Folio FB015 ***DO NOT CHAMFER OUTSIDE DIA***
 Descriptions: 120 - (QC8- Inspect parts - second check)
 130 - ***HEAT TREAT AS PER DWG D4202*** Mat'l: 6061-T6 Aluminum Tubing Per WWT-700/6
 140 - (Receive & Inspect for Damage & Mat'l Certs)
 150 - (QC6- All purchased or subcontracted products)
 160 - (Assemble as per dwg) WASH SPACER AS PER QSI005
 190 - (Identify as per dwg & Stock Location: _____) ***STOCK IN SKIDTUBE CELL***
 200 - (QC21- Final Inspection - Work Order Release)

PO 012648

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
M6061T6T0.500W.058	6061-T6 Round Tube .500 X.058W	210 ft (.35 ea)	100-Hardinge - 1	5154972

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Hardinge - 1	M6061T6T0.500W.058	210	281	0

Part Specifications

Spec No	Description	Target/Tolerance	Limits	Type	Special Comments
1	Spacer	0.500inches ± 0.010	0.510 0.490	Product	
2	Spacer	0.058inches ± 0.010	0.068 0.048	Product	
3	Spacer	4.145inches + 0.030 - 0.010	4.175 4.135	Product	

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Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐	DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering ☐ Water Jet ☐ Supplier ☐ Quality ☐			
Date : _____	Sequence #: _____	QTY Affected : _____		MRB (QS1042)	
Description Work Order Deviation			Disposition		
			Completed By		
			Lead hand / Supervisor		
			QC / QA Coordinator		
Root Cause Operator ☐ Manufacturing Process ☐ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY ☐ Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☐ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread			
Other/Details:					



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Container No: S154382



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Date: 02/15/19



Dart Aerospace Ltd.
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PURCHASE ORDER

PO042648



Supplier: MEI001-VC
Metcor Inc.
560 Boul. Arthur Sauve
Saint-Eustache
QC
J7R 5A8 Canada
Phone: 450 473 1884
Fax: 450 491 5498

PO No: PO042648
PO Date: 2/19/19
Due Date: 2/28/19
Purchase Order
Revision:
Revision Date:
Ship-To Contact: Tsimiklis, ChrisoulaPhone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pynt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	190608	D4720-1	Spacer : Various STC's HEAT TREAT TO T4/T42 CONDITION MIN. UTS=30 KSI (60 HREW MIN) NOTE: DETAIL C OF C REQUIRED PART ARE MADE FROM 6061-T6 MATERIAL***	Firmed	-	2/28/19	400 pcs	0 pcs	400 pcs	\$0.8178571/pcs	\$327.14
2	190707	D4202-1	Spacer : Various STC's ***HEAT TREAT AS PER DWG D4202*** Mat'l: 6061-T6 Aluminum Tubing Per WWT-700/6	Firmed	-	2/28/19	440 pcs	0 pcs	440 pcs	\$0.8178571/pcs	\$359.86

Grand Total: \$687.00



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PURCHASE ORDER

PO042648



Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 2/21/19 10:57 AM dart.tsimiklis.chrisoula

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ
ST-EUSTACHE, QC J7R 5A8
Tel: 450-473-1884 / Fax: 450-491-5498

Reçu de livraison

Delivery Receipt

BON DE TRAVAIL Order	EXPÉDITEUR Shipper ID	BON D'EXPÉDITION Shipper
334312	1	135350

EXPÉDITION COMPLÈTE / Shipped Complete

CLIENT /Customer 215

DART AEROSPACE

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053



LIVRÉ À /Shipped To

DART AEROSPACE

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
Ph: 613-632-5200
Fax: 613-632-1053

COMMANDE DU CLIENT Customer PO	BON DE LIVRAISON DU CLIENT Customer Shipper No.	TYPE DE MATÉRIEL Material Type	DATE DE LA COMMANDE Order Date	TRANSPORTEUR Carrier
42648 ✓		AL-6061	2019/2/20	CLIENT

QUANTITÉ Quantity	No. PIÈCE / Part No.	NOM DE LA PIÈCE / Part Name	DESCRIPTION DE LA PIÈCE Part Description	POIDS Weight
✓ 840	D4720-1			22,
399	(400) D4720-1	JOB 190608		
439	(440) D4202-1	JOB 190707		

1 BOITE DE CARTON

TYPE DE CONTENEUR Container Type	# DE CONTENEURS # Of Containers	COMMENTAIRES CONTENEUR Container Comments
BOITE DE CARTON	1	

CERTIFICAT

EXPÉDIÉ PAR: Shipped by:	
-----------------------------	--

QUANTITÉ EXPÉDIÉE / Quantity Shipped : 840

POIDS EXPÉDIÉ / Weight Shipped : 22,00

QUANTITÉ RESTANTE / Quantity Remaining : 0

POIDS RESTANT / Weight Remaining : 0,00

APPROUVÉ

CERTIFICAT

QUANTITÉ EXPÉDIÉE Quantity Shipped: 840

POIDS EXPÉDIÉ / Weight Shipped : 22,00

Signature:

Date:

EXPÉDIÉ LE / Shipped On : 2019/03/11

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
334312	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
42648	N/A	AL-6061	N/A	N/A

SPÉCIFICATIONS DU PROCÉDÉ processing specifications

SOL ANNEAL

SINGLE AGING TO CONDITION T42

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
CONDUCT	36 - 44 %IACS	168 60 KHZ	40 - 41 %IACS
HARDNESS	60 HREW MIN	168 (916)	61.5 - 65.5 HREW

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
840	22 399 439	D4720-1 (400) D4720-1 JOB 190608 (440) D4202-1 JOB 190707 1 BOITE DE CARTON

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COMMENTAIRES / comments

SOLUTION ANNEAL 985F 35 MINS
AGE HARDEN AMBIANT

Heat treatment (HT) was performed with equipment that meets the requirements of requested specification. All HT operations were performed in compliance with the required HT specification and all verifications have been performed and documented. No unauthorized changes were performed in regards to the HT. We certify that the material was manufactured, sampled, tested and inspected in accordance with the material specification and the purchase order and was found to meet the requirements.

This document and any attached documents may contain confidential or proprietary information and may be subject to export control laws and regulations. If you are not the intended recipient, you are notified that any dissemination, copying of this e-mail and any attachments thereto or use of their contents by any means whatsoever is strictly prohibited. Unauthorized export or re-export is prohibited.

Le traitement thermique (TT) a été fait en utilisant des équipements en conformité avec la spécification demandée. Toutes les opérations de TT ont été faites en conformité avec les requis de la spécification demandée et toutes les vérifications et les tests demandés ont été faites et documentés. Aucun changement n'a été faite par rapport au TT. On

METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Détaillé

Detailed Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
334312	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K6A 1K7

1

Formations et les tests demandés ont été faits et documentés. Aucun changement n'a été fait par rapport au P.T. On certifie que le matériel a été fabriqué, échantillonné, testé et inspecté en accord avec les spécifications du matériel et le bon de commande et le matériel rencontre les exigences spécifiées.

Ce document et les documents qui lui sont joints peuvent contenir des informations confidentielles, être soumis aux réglementations relatives au contrôle des exportations ou ayant un caractère privé. S'ils ne vous sont pas destinés, nous vous signalons qu'il est strictement interdit de les divulguer, de les reproduire ou d'en utiliser de quelque manière que ce soit le contenu. Toute exportation ou réexportation non autorisée est interdite.

APPROUVÉ par / Approved by:

Vincent Caron



DATE: 2019-03-11

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METCOR INC.

560 BOUL. ARTHUR-SAUVÉ, ST-EUSTACHE, QC, J7R 5A8

Tél.: 450-473-1884

Télécopieur / Fax administration: 450-491-5498

Télécopieur / Fax production: 450 491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT load
334312	1

CLIENT / customer 215

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

LIVRÉ À / shipped to:

DART AEROSPACE

1270 ABERDEEN

HAWKESBURY

ON K8A 1K7

COMMANDE DU CLIENT customer po	CLASSIFICATION PIECE part classification	MATÉRIEL material	MAÎTRE D'OEUVRE prime contractor	PROGRAM
42648 ✓	N/A	AL-6061	N/A	N/A

SPÉCIFICATIONS DU PROCÉDÉ

processing specifications

SOL ANNEAL

SINGLE AGING TO CONDITION T42

EXIGENCE / requirement	SPÉCIFICATIONS / specified	TESTS EXÉCUTÉS / performed	RÉSULTATS DE TESTS / results
CONDUCTIVITY	36 - 44 %IACS	168	40 - 41 %IACS
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DAS
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9-89

QUANTITÉ quantity	POIDS weight	DESCRIPTION DES PIÈCES parts description
✓ 840	22 399 439	D4720-1 (400) D4720-1 JOB 190608 ✓ (440) D4202-1 JOB 190707 ✓ 1 BOITE DE CARTON

12/3/19

COMMENTAIRES / comments

APPROUVÉ par / Approved by:

[Signature]



DATE: 2019-03-10

APPROUVÉ